Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of generating an optical pulse in a gas discharge laser, comprising:

applying a main discharge voltage to a pair of main discharge electrodes in a discharge chamber of the laser in order to charge the pair of main discharge electrodes;

receiving a signal from a photodetector indicating the emission of an optical pulse in the oscillator chamber;

receiving the optical pulse from the oscillator chamber;

applying a trigger ionization voltage to an ionization element in the discharge chamber, subsequent to the charging of the pair of main electrodes, such that the discharge of the charged pair of main discharge electrodes substantially coincides with the receiving of the optical pulse, the signal received from the photodetector being used to determine the timing of the application of the trigger ionization voltage; and

discharging the main discharge voltage between the main discharge electrodes in response to the applying of the trigger ionization voltage.

2. (Original) A method according to claim 1, further comprising:

timing the application of the trigger ionization voltage to occur when a maximum voltage charge exists on the pair of main discharge electrodes.

3. (Original) A method according to claim 1, wherein:

applying a trigger ionization voltage to an ionization element includes applying the trigger ionization voltage to an ionization element selected from the group consisting of ionization electrodes, corona rods, and ionization pins.

4. (Original) A method according to claim 1, further comprising:

using an ionization circuit to apply the trigger ionization voltage, the ionization circuit being electrically isolated from a discharge circuit used to apply the main discharge voltage.

5. (Original) A method according to claim 1, further comprising:

using an ionization circuit to apply the trigger ionization voltage, the ionization circuit including a high-voltage solid state switch whereby the trigger ionization is applied in response to a closing of the solid state switch.

Claims 6-7. (Canceled)

8. (Currently Amended) A method according to claim [[7]] 1, further comprising:

amplifying the optical pulse in the discharge chamber when the charged pair of main electrodes discharges.

Claims 9-10. (Canceled)

11. (Currently Amended) A method according to claim [[10]] 1, wherein:

timing the application of the trigger ionization voltage further includes receiving a signal from an electronic control module, the signal indicating a delay for the timing of the application.

12. (Currently Amended) A method of generating an optical pulse in a gas discharge laser, comprising:

applying a main discharge voltage to a pair of main discharge electrodes in a discharge chamber of the laser in order to charge the pair of main discharge electrodes;

applying a trigger ionization voltage to an ionization element in the discharge chamber, subsequent to the charging of the pair of main electrodes;

receiving an optical pulse from an oscillator chamber;

discharging the main discharge voltage between the main discharge electrodes in response to the applying of the trigger ionization voltage; and

~~A method according to claim 9, wherein:~~

timing the application of the trigger ionization voltage such that the discharge of the charged pair of main discharge electrodes substantially coincides with the receiving of the optical pulse, a determination of the timing including ~~includes~~ receiving a signal from a pick off loop for the oscillator chamber, the signal indicating the application of a charging voltage to a pre-ionization unit of the oscillator chamber.

Claims 13-19. (Canceled)

20. (New) A method of generating an optical pulse in a gas discharge laser, comprising:

applying a main discharge voltage to a pair of main discharge electrodes in a first discharge chamber of the laser in order to charge the pair of main discharge electrodes;

receiving an optical pulse from a second discharge chamber; and

applying a trigger ionization voltage to an ionization element in the first discharge chamber, subsequent to the charging of the pair of main discharge electrodes, such that the main discharge voltage between the main discharge electrodes is discharged, in response to the applying of the trigger ionization voltage, at a time that substantially coincides with the receiving of the optical pulse.

21. (New) A method according to claim 20, wherein:

applying a trigger ionization voltage to an ionization element includes applying the trigger ionization voltage to an ionization element selected from the group consisting of ionization electrodes, corona rods, and ionization pins.

22. (New) A method according to claim 20, further comprising:

using an ionization circuit to apply the trigger ionization voltage, the ionization circuit being electrically isolated from a discharge circuit used to apply the main discharge voltage.

23. (New) A method according to claim 20, further comprising:

using an ionization circuit to apply the trigger ionization voltage, the ionization circuit including a high-voltage solid state switch whereby the trigger ionization is applied in response to a closing of the solid state switch.

24. (New) A method according to claim 20, wherein:

an optical pulse is generated in the discharge chamber when the charged pair of main electrodes discharges.

25. (New) A method according to claim 20, further comprising:

amplifying the optical pulse in the discharge chamber when the charged pair of main electrodes discharges.